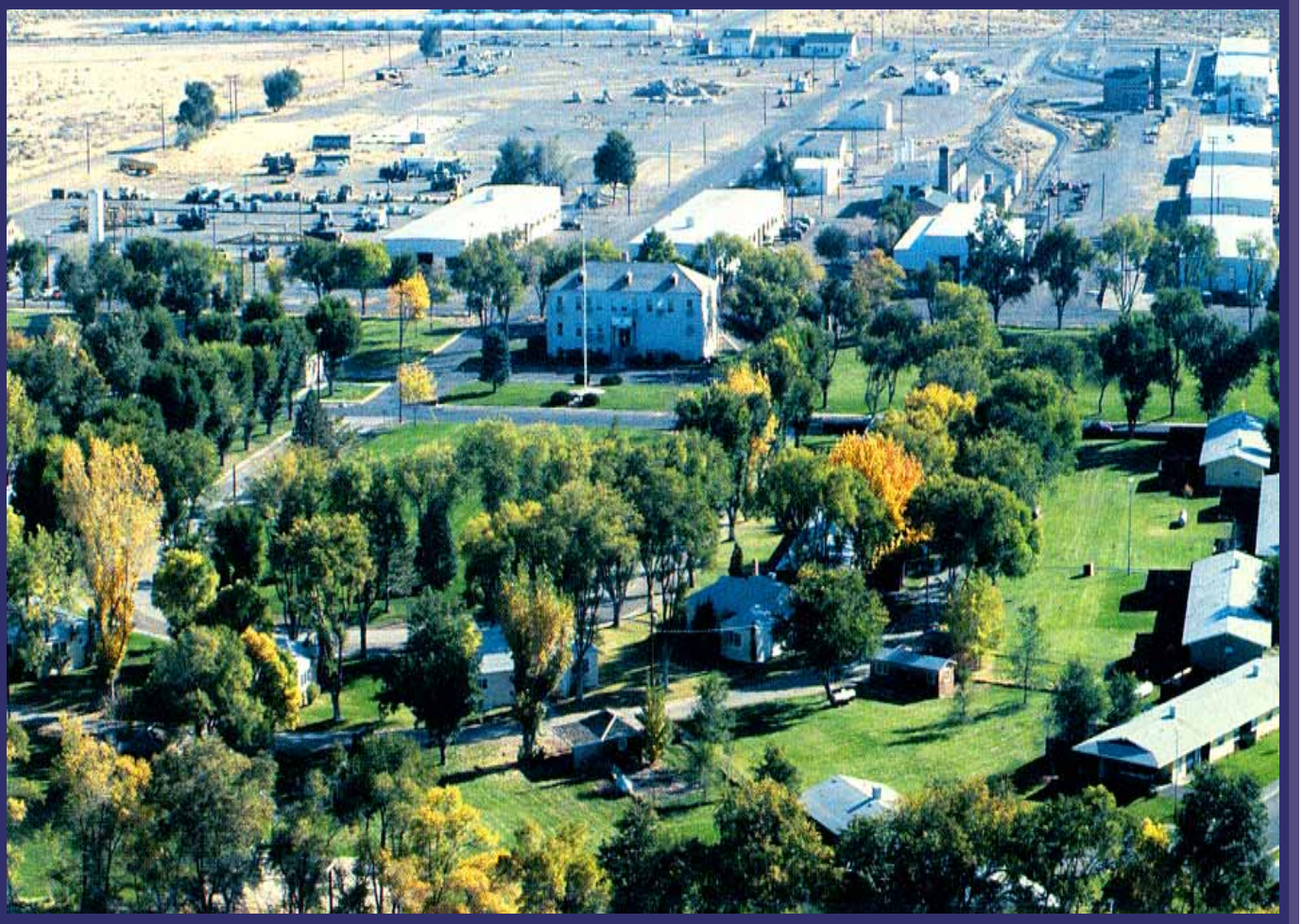
Sierra Army Depot

Installation Action Plan

FY05 as of June 2004



FY2005

Sierra Army Depot

California

Installation Action Plan

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Acronyms & Abbreviations

AEDB-R	Army Environmental Database - Restoration
ALF	Abandoned Landfill
ADRA	Ammunition Demilitarization and Renovation Area
BRAC	Base Realignment and Closure Action
BLDG	Building
Cal-EPA	California Environmental Protection Agency
CAMU	Corrective Action Management Unit
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CRWQCB	California Regional Water Quality Control Board
DMA	Demolition Area
DRMO	Defense Reutilization and Marketing Office
DSA	Diesel Spill Area
DSERTS	Defense Site Environmental Restoration Tracking System (now called AEDB-R)
DTSC	Department of Toxic Substances Control
EE/CA	Engineering Evaluation/Cost Analysis
EFFTF	Existing Fire-Fighting Training Facility
ER,A	Environmental Restoration, Army (formerly called DERA)
FFS	Focused Feasibility Study
FFSRA	Federal Facility Site Remediation Agreement
FS	Feasibility Study
FY	Fiscal Year
IAP	Installation Action Plan
IRA	Interim Remedial Action
IRP	Installation Restoration Program
IRZ	In Situ Reactive Zone
LBG	Lower Burning Ground
LSTP	Large Sewage Treatment Ponds
LTM	Long-Term Monitoring
MCL	Maximum Contaminant Level
MEP	Master Environmental Plan
MACOM	Major Army Command
MMRP	Military Munitions Range Program
NE	Not Evaluated
NFA	No Further Action
NPL	National Priorities List
OB/OD	Open Burning/Open Detonation
OE	Ordnance Explosives
OFFTF	Old Fire-Fighting Training Facility
PA	Preliminary Assessment
PBC	Performanced Based Contract
POL	Petroleum, Oil & Lubricants
PP	Proposed Plan
PS	Paint Shop Subsite
PSW	Potable Supply Well
RA	Remedial Action
RA(C)	Remedial Action - Construction
RA(O)	Remedial Action - Operation
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act

Acronyms & Abbreviations

RD	Remedial Design
REM	Removal
RI	Remedial Investigation
RIP	Remedy in Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
S&R	Supervision and Review
SI	Site Inspection
SIAD	Sierra Army Depot
SSA	Southern Sites Area
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compounds
TCE	Trichloroethylene
TLB	TNT Leaching Beds
TNB	Trinitrobenzene
TNT	Trinitrotoluene
TPH	Total Petroleum Hydrocarbons
TSA	Toxic Storage Area
UBG	Upper Burning Ground
UDP	Unidentified Pit
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEC	United States Army Environmental Center
USAEHA	United States Army Environmental Hygiene Agency (replaced by USCHPPM)
USATHMA	United States Army Toxic and Hazardous Material Agency (replaced by USAEC)
UXO	Unexploded Ordnance
VOC	Volatile Organic Compounds

Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year restoration program for an installation. The plan will define Installation Restoration Program (IRP) requirements and propose a comprehensive approach and associated costs to conduct future investigations and remedial actions at each site at the installation and other areas of concern.

In an effort to coordinate planning information between the IRP manager, major army commands (MACOMs), installations, executing agencies, regulatory agencies, and the public, an IAP has been completed for the Sierra Army Depot. The IAP is used to track requirements, schedules and budgets for all major Army installation restoration programs.

All site specific funding and schedule information has been prepared according to projected overall Army funding levels and is therefore subject to change. Under current project funding, all remedies will be in place at the Sierra Army Depot by the end of 2012.

Work is planned under the IRP for thirty years beyond the date the final remedy is put into place.

The following agencies contributed to the formulation and completion of this Installation Action Plan:

ARCADIS

Armstead Associates

Department of Toxic Substance Control

Engineering & Environment, Inc

Regional Water Quailty Control Board

Sierra Army Depot

USACHPPM

Summary

STATUS

No NPL sites have been identified at the Sierra Army Depot.

NUMBER OF ER,A SITES:

37
- 8 Active ER,A Eligible Sites
- 29 Response Complete

NUMBER OF MMRP SITES:

7

DIFFERENT AEDB-R SITE TYPES:

5	Explosive Ordnance Areas	1	Waste Line
5	Spill Site Areas	5	Storage Areas
1	Surface Impoundment Lagoon	4	Burn Areas
5	Landfills	3	Disposal Pti/Dry Wells
1	Sewage Effluent Settling Pond	2	Other
1	Chemical Disposal	1	Surface Disposal Area
1	Contaminated Groundwater	1	Contaminated Soil Piles
1	Contaminated Building		

CONTAMINANTS OF CONCERN:

Trichloroethylene; Petroleum/ diesel; 1,3,5-TBN, Lead; Unexploded Ordnance (UXO)

MEDIA OF CONCERN:

Soil, Groundwater, Sediment

COMPLETED REM/IRA/RA:

- SIAD-015: Soil removal
- SIAD-012: Soil removal
- SIAD-011: Soil removal
- SIAD-001(A): Soil composting
- SIAD-001(B): Soil removal
- SIAD-007: Soil removal and bio-venting
- SIAD-002, Soil Removal

CURRENT IRP PHASES: (AEDB-R SITES ONLY)

PBC

PROJECTED IRP PHASES: (AEDB-R SITES ONLY)

PBC

IDENTIFIED POSSIBLE REM/IRA/RA:

- SIAD-002, Conclude SVE, begin Monitored Natural Attenuation
- SIAD-003, Soil Removal & Replacement of PSWs
- SIAD-003, Zero Valent Iron Wall
- SIAD-010, Soil Removal/CAMU
- SIAD-014, In-Situ GW Treatment, HRC & ZVI
- SIAD-022, Hot Spot Removal/CAMU, Cap

DURATION:

Year of IRP Inception:	1989
Year of IRP Completion Excluding LTM:	2012
Year of IRP Completion Including LTM:	2042

Installation Information

SITE DESCRIPTION:

SIAD is located in Honey Lake Valley of Lassen County in northeast California, approximately 4 miles west of the California-Nevada state border and 5 miles east of U.S. Highway 395.

COMMAND ORGANIZATION:

INSTALLAION: Sierra Army Depot, Directorate of Public Works
SUB-INSTALLATION: Environmental Management Division

IRP EXECUTING AGENCIES:

FOR INVESTIGATION PHASE:
Sierra Army Depot, Environmental Management Division

FOR REMEDIAL DESIGN/ ACTION PHASE:
Sierra Army Depot, Environmental Management Division; U.S. Army Corps of Engineers, Sacramento District

REGULATORY PARTICIPATION:

FEDERAL: EPA defers to State
STATE: California Environmental Protection Agency, Department of Toxic Substances Control (DTSC)
California Regional Water Quality Control Board, Lahonton Region (CRWQCB)

REGULATORY STATUS:

Non-NPL, off-post contamination
Interagency Agreement, Two Party (State and Army) (FFSRA)

MAJOR CHANGES TO IAP FROM PREVIOUS YEAR (FY03):

- A PBC was signed with ARCADIS for all open IRP sites.
- MMRP site have been added to the IAP.

Installation Description

LOCATION

SIAD is located in Honey Lake Valley of Lassen County in northeast California, approximately 4 miles west of the California-Nevada state border and 5 miles east of U.S. Highway 395. The two largest communities near SIAD are Susanville, California (county seat of Lassen County, located 35 miles northwest of SIAD) and Reno, Nevada (located 55 miles southeast of SIAD). Other neighboring communities, all in California, include Doyle (located 8 miles south of SIAD), Herlong and the Sage Flats Area, located near the southern entrance to the main depot.

The total area of SIAD is 37,937 acres. The areas are the main depot (31,390 acres), and the Upper Burning Ground is located 2 miles northeast of the depot's main boundary and is 4,030 acres. Mountain ranges bordering SIAD are the Amedee and Skedaddle Mountains to the north, the Fort Sage Mountains to the south, and the Diamond Mountains to the southwest.

HISTORY

In 1942, SIAD began operations involving reserve storage of supplies and inert materials belonging to the Treasury Department. The missions of receipt, storage, and issue of explosives were assigned to the depot upon completion of the large igloo Storage Area. In 1954, the missions of receipt, storage, and issue of guided missiles and propellant fuels were added.

Activity at the site has fluctuated with the involvement of the United States in active military conflicts. The work force at the site was at an all-time high of 2,327 during the Korean conflict. The work force rose from a low of 974 to a high of 1,577 in 1967 during the Vietnamese conflict.

On 30 May 1991, the Federal Facility Site Remediation Agreement (FFSRA) was signed between the Army; the State of California Environmental Protection Agency (Cal-EPA), Department of Toxic Substances Control (DTSC); and Cal-EPA, Regional Water Quality Control Board (CRWQCB). The FFSRA identified and prioritized 22 sites at SIAD and placed them into three different groups. A 23rd site was later added to the investigation schedule. Group I contains the sites with the highest contamination potential while Group II, and Group III have progressively lower contamination potential. The FFSRA places tight schedules on the start date of investigations and the delivery date of primary documents for each group of sites.

The RAB was established in November 1996 and meets five times annually.

MISSION

To provide our warfighter's rapid deployment of the best quality equipment and supplies from Sierra Army Depot to anywhere in the world.

To provide maintenance, storage, logistical and training support (to Active Reserve National Guard) for all assets managed which include Operational Project Stocks for Deployable Medical Systems, Medical Supplies, Petroleum and Water Systems, Aviation Systems, and Force Provider.

Contamination Assessment

Past operations at SIAD have resulted in the generation and disposal of various types of contaminants across the installation. Solvents, heavy metals, and explosives are the primary contaminants. There is groundwater contamination above MCLs at SIAD-001, 002, 003, 014. Off-post groundwater contamination (TCE) above the MCL was found at SIAD-014. An Interim Remedial Action (IRA) of pump and treat is operating while the pilot study evaluates potential replacement of the pump and treat with an in-situ groundwater treatment system. Sites requiring significant soil remediation are SIAD-001, 002, 003, 007, 011, 012, 015, 022. The table on the following page lists the previous environmental studies conducted for SIAD.
The Master Environmental Plan (MEP) identified 22 sites with contamination potential. For the FFSRA, the 22 sites were separated into three Groups (Group I, Group II, and Group III) based on risk evaluations conducted by the RPMS. In response to the MEP and the anticipated signing of the FFSRA, investigations began in September 1989 for the first five highest priority sites named Group I (formerly named Phase I).

Group I

- TNT Leaching Beds (SIAD-001)
- DRMO Trench Area (SIAD-002)
- Abandoned Landfill (SIAD-003)
- Construction Debris Landfill (SIAD-004)
- Chemical Burial Site (SIAD-005)
- Honey Lake (SIAD-006)

Group II

- Existing Fire-Fighting Training Facility (SIAD-007)
- Active Sanitary Landfill (SIAD-008) – not eligible for ER,A funds
- Ammunition Demilitarization and Renovation Area (SIAD-009)
- Upper Burning Ground - Hanson's Hole (SIAD-010)
- Diesel Spill Area (SIAD-011)
- Building 1003 Area (SIAD-012)

Group III

- Old Fire Fighting Training Facility (SIAD-013)
- Building 210 Area (SIAD-014)
- Large Sewage Treatment Ponds (SIAD-015)
- Lower Burning Ground (SIAD-016)
- Nike Missile Fuel Disposal Site A (SIAD-017)
- Nike Missile Fuel Disposal Site B (SIAD-018)
- Toxic Storage Area at Building 578 (SIAD-019)
- 1960 Demolition Area (SIAD-020)
- Open Popping Furnace (SIAD-022)
- The Unidentified Pit (SIAD-059)

Group IV

- SIAD Spill Areas (Final ROD Sites) (SIAD-58)

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1983 - 1	Reassessment of Sierra Army Depot, Herlong, California. Report No. 149R*		Environmental Science and Engineering, Inc.	USATHAMA (Aberdeen)	Sep-83
1988 - 1	Master Environmental Plan for the Sierra Army Depot		Energy and Environmental Systems Division, Argonne National Laboratory	USATHAMA (Aberdeen)	Oct-88
1989 - 1	Public Involvement and Response Plan	Sierra Army Depot, Herlong, California	Hunter/ESE, Inc	USATHAMA (Aberdeen)	Apr-89
1990 - 1	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Final Sampling Design Plan	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Mar-90
1990 - 2	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Final Quality Assurance/Quality Control Plan	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Mar-90
1990 - 3	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Final Health and Safety Plan	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Mar-90
1990 - 4	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Remedial Investigation, Appendices A - F	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Sep-90
1990 - 5	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Draft Final Interim Remedial Measures Evaluation	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Oct-90
1991 - 1	Sierra Army Depot, Phase II Remedial Investigation/Feasibility Study, Lassen County, California*	Final Health and Safety Plan	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Mar-91
1991 - 2	Sierra Army Depot, Phase II Remedial Investigation/Feasibility Study, Lassen County, California*	Final Sampling Design Plan	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Apr-91
1991 - 3	Sierra Army Depot, Phase II Remedial Investigation/Feasibility Study, Lassen County, California*	Final Quality Assurance/Quality Control Plan	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Apr-91

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1991 - 4	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Final Remedial Investigation	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Oct-91
1991 - 5	Sierra Army Depot, Phase I Remedial Investigation/Feasibility Study, Lassen County, California	Final Remedial Investigation, Appendices G-Q	James M. Montgomery Consulting Engineers, Inc. and E.C. Jordan	USATHAMA (Aberdeen)	Oct-91
1992 - 1	Sierra Army Depot, Group I Follow-Up Remedial Investigation/Feasibility Study, Lassen County, California*	Final Sampling Design Plan Addendum	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Feb-92
1992 - 2	Sierra Army Depot, Group I Follow-Up Remedial Investigation/Feasibility Study, Lassen County, California*	Final Quality Assurance/Quality Control Plan Addendum	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Feb-92
1992 - 3	Sierra Army Depot, Group I Follow-Up Remedial Investigation/Feasibility Study, Lassen County, California*	Final Health and Safety Plan Addendum	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Feb-92
1992 - 4	Sierra Army Depot, Group II Remedial Investigation/Feasibility Study, Lassen County, California*	Final Remedial Investigation	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Jul-92
1992 - 5	Sierra Army Depot, Group II Remedial Investigation/Feasibility Study, Lassen County, California*	Final Remedial Investigation, Appendices	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Jul-92
1992 - 6	Final Work Plan*	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA (Aberdeen)	Sep-92
1992 - 7	Final Health and Safety Plan*	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA (Aberdeen)	Sep-92
1992 - 8	Final Quality Assurance Project Plan*	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA (Aberdeen)	Sep-92

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1992 - 9	Total Environmental Program Support Final Quality Assurance Project Plan (Rev. No. 1)*	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA	Oct-92
1992 - 10	Sierra Army Depot, Group II Remedial Investigation/Feasibility Study, Lassen County, California*	Final Feasibility Study, Existing Fire-Fighting Training Facility	James M. Montgomery Consulting Engineers, Inc.	USATHAMA (Aberdeen)	Dec-92
1993 - 1	Sierra Army Depot, Group I Remedial Investigation/Feasibility Study, Lassen County, California*	Draft Final Feasibility Study, TNT Leaching Beds Area and Diesel Spill Area Groundwater	Montgomery Watson	USATHAMA (Aberdeen)	Apr-93
1993 - 2	Sierra Army Depot, Group I Remedial Investigation/Feasibility Study, Lassen County, California*	Draft Final Feasibility Study, TNT Leaching Beds Area and Diesel Spill Area Soils	Montgomery Watson	USATHAMA (Aberdeen)	May-93
1993 - 3	Sierra Army Depot, Lassen County, California, 1992 Group I Follow-Up Remedial Investigation/Feasibility Study*	Draft Final Remedial Investigation	Montgomery Watson	USATHAMA (Aberdeen)	May-93
1993 - 4	Sierra Army Depot, Lassen County, California, 1992 Group I Follow-Up Remedial Investigation/Feasibility Study*	Draft Final Remedial Investigation, Appendices Volume 1	Montgomery Watson	AEC (Aberdeen)	May-93
1993 - 5	Sierra Army Depot, Lassen County, California, 1992 Group I Follow-Up Remedial Investigation/Feasibility Study*	Remedial Investigation, Appendices Volume II	Montgomery Watson	AEC (Aberdeen)	May-93
1993 - 6	Sierra Army Depot, Installation Restoration Program*	Proposed Plan for Existing Fire Fighting Training Facility	Sierra Army Depot		Jun-93
1993 - 7	Sierra Army Depot, Lassen County, California; Group I and II Follow-Up Remedial Investigation/Feasibility Study*	Draft Final Sampling Design Plan	Montgomery Watson	AEC (Aberdeen)	Jul-93
1993 - 8	Sierra Army Depot, Proposed Remedial Plan*	Existing Fire Fighting Training Facility	USAEC (Aberdeen)		Jul-93
1993 - 9	Sierra Army Depot, Lassen County, California; Group I and II Follow-Up Remedial Investigation/Feasibility Study*	Draft Final Quality Assurance/Quality Control Plan	Montgomery Watson	AEC (Aberdeen)	Jul-93
1993 - 10	Sierra Army Depot, Lassen County, California; Group I and II Follow-Up Remedial Investigation/Feasibility Study*	Draft Final Health and Safety Plan	Montgomery Watson	AEC (Aberdeen)	Jul-93

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1993 - 11	Final Interim Remedial Measures Evaluation*	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Dec-93
1994 - 1	Sierra Army Depot, Lassen County, California*	Record of Decision/Remedial Action Plan, Final, Existing Fire-Fighting Training Facility	Montgomery Watson	AEC (Aberdeen)	Feb-94
1994 - 2	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing Treatability Study*	Final Work Plan	Montgomery Watson and Tetra Tech	USACOE (Sacramento)	Mar-94
1994 - 3	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing Treatability Study*	Final Chemical Data Acquisition Plan	Montgomery Watson and Tetra Tech	USACOE (Sacramento)	Mar-94
1994 - 4	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing Treatability Study*	Final Site Safety and Health Plan	Montgomery Watson and Tetra Tech	USACOE (Sacramento)	Mar-94
1994 - 5	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing Treatability Study*	Permeability and Respiration Test Report	Montgomery Watson and Tetra Tech	USACOE (Sacramento)	May-94
1994 - 6	Sierra Army Depot, Lassen County, California*	Proposed Plan, Seven Sites, Final	Montgomery Watson	AEC (Aberdeen)	May-94
1994 - 7	Final Remedial Investigation, Volume I of II*	Sierra Army Depot - Group III A Sites, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Jun-94
1994 - 8	Final Remedial Investigation, Volume II of II, Appendices*	Sierra Army Depot - Group III A Sites, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Jun-94
1994 - 9	Final Remedial Investigation, Volume I of II*	Sierra Army Depot - Group III B Sites, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Jun-94
1994 - 10	Final Remedial Investigation, Volume II of II, Appendices*	Sierra Army Depot - Group III B Sites, Lassen County, California	Harding Lawson Associates		Jun-94
1994 - 11	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Design, Design Analysis	Montgomery Watson	USACOE (Sacramento)	Jul-94
1994 - 12	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Chemical Data Acquisition Plan	Montgomery Watson	USACOE (Sacramento)	Jul-94

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1994 - 13	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Site Safety and Health Plan	Montgomery Watson	USACOE (Sacramento)	Jul-94
1994 - 14	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Health and Safety Design Analysis	Montgomery Watson	USACOE (Sacramento)	Jul-94
1994 - 15	Final Investigation-Derived Waste Management Plan*	Groups I, II, and III Remedial Investigation and Feasibility Studies, Sierra Army Depot, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Jul-94
1994 - 16	Sierra Army Depot, Lassen County, California; Group I and II Follow-Up Remedial Investigation/Feasibility Study*	Draft Final Remedial Investigation	Montgomery Watson	AEC (Aberdeen)	Dec-94
1994 - 17	Technical Memorandum Regarding Building 210 Area Extraction Well Installation and Development and Non-Usability*	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates		Dec-94
1995 - 1	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Corrected Design, Design Analysis	Montgomery Watson	USACOE (Sacramento)	Jan-95
1995 - 2	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Corrected Design, Specification No. 94-45	Montgomery Watson	USACOE (Sacramento)	Jan-95
1995 - 3	Sierra Army Depot, Lassen County, California; TNT Leaching Beds Area Groundwater Monitoring Implementation	Draft Final Sampling Plan Addendum	Montgomery Watson and Harding Lawson Associates	AEC (Aberdeen)	Feb-95
1995 - 4	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Corrected Design, Design Analysis	Montgomery Watson	USACOE (Sacramento)	Apr-95
1995 - 5	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing Treatability Study*	Final Treatability Study Report	Montgomery Watson	USACOE (Sacramento)	May-95
1995 - 6	Sierra Army Depot, California; Underground Storage Tank Replacement	Final Corrected Design, Specification No. 9545	Montgomery Watson	USACOE (Sacramento)	May-95
1995 - 7	Sierra Army Depot Group III Stage 3 Remedial Investigation-Derived Waste*		Harding Lawson Associates		May-95
1995 - 8	Sierra Army Depot, Lassen County, California	Record of Decision/Remedial Action Plan, Seven Sites, Final	Montgomery Watson	AEC (Aberdeen)	Sep-95

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1995 - 9	Final Field Sampling Design Plan*	Sierra Army Depot, Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA (Aberdeen)	Oct-95
1995 - 10	Final Building 210 Area Follow-On Remedial Investigation	Sierra Army Depot, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Dec-95
1996 - 1	Draft Final Feasibility Study Report*	Sierra Army Depot Group III B Sites, Lassen County, California	Harding Lawson Associates	AEC (Aberdeen)	Jan-96
1996 - 2	Proposed Plan for Nine Sites at Sierra Army Depot	Sierra Army Depot Installation Restoration Program	Harding Lawson Associates		Feb-96
1996 - 3	Sierra Army Depot, Lassen County, California; TNT Leaching Beds Area Groundwater Monitoring Implementation	Draft Final Initial Monitoring Report, Volume I of II	Montgomery Watson and Harding Lawson Associates	AEC (Aberdeen)	Feb-96
1996 - 4	Sierra Army Depot, Lassen County, California; TNT Leaching Beds Area Groundwater Monitoring Implementation	Draft Final Initial Monitoring Report, Volume II of II, Appendices	Montgomery Watson and Harding Lawson Associates	AEC (Aberdeen)	Feb-96
1996 - 5	Sierra Army Depot, Lassen County, California	Focused Feasibility Study, Draft Final, Building 1003 Area	Montgomery Watson	AEC (Aberdeen)	Feb-96
1996 - 6	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support*	Final Work Plan Addendum	Montgomery Watson	USACOE (Sacramento)	Feb-96
1996 - 7	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support*	Final Site Safety and Health Plan Addendum	Montgomery Watson	USACOE (Sacramento)	Feb-96
1996 - 8	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support*	Final Chemical Data Acquisition Plan Addendum	Montgomery Watson	USACOE (Sacramento)	Feb-96
1996 - 9	Sierra Army Depot, Lassen County, California; TNT Leaching Beds Area Groundwater Monitoring Implementation	Draft Final Quarterly Groundwater Monitoring Report, First Quarter	Montgomery Watson	AEC (Aberdeen)	Mar-96
1996 - 10	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support*	Technical Memorandum, Respiration Test No. 1	Montgomery Watson	USACOE (Sacramento)	May-96

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1996 - 10a	Base Realignment and Closure (BRAC) Cleanup Plan, Version 1	Herlong and Honey Lake Reuse Parcels, Sierra Army Depot, Lassen County, California	Harding Lawson Associates	USAEC	May-96
1996 - 11	Sierra Army Depot, Lassen County California; Abandoned Landfill and Southern Sites Area Follow-Up Remedial Investigation/Feasibility Study	Draft Final Sampling Plan	Montgomery Watson	AEC (Aberdeen)	Jun-96
1996 - 12	Sierra Army Depot, Lassen County, California; DRMO Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation	Montgomery Watson	AEC (Aberdeen)	Jun-96
1996 - 13	Sierra Army Depot, Lassen County, California; DRMO Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation Report, Volume II of II	Montgomery Watson	AEC (Aberdeen)	Jun-96
1996 - 14	Draft Final, Delivery Order (PRAC) Diesel Spill Area Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	Jul-96
1996 - 15	Draft Final Delivery Order (PRAC) TNT Leaching Beds Area Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	Jul-96
1996 - 16	Project Work Plan for Herlong Reuse Parcel*	Sierra Army Depot	Weiss Associates (for USACOE)	USACOE (Sacramento)	Aug-96
1996 - 17	Final Record of Decision/Remedial Action Plan, Nine Sites, Sierra Army Depot, Lassen County, California	Total Environmental Program Support	Harding Lawson Associates		Oct-96
1996 - 17a	Field Sampling Plan, Old Popping Furnace	Sierra Army Depot, Lassen County, California	Harding Lawson Associates	USAEC	Oct-96
1996 - 18	Safety and Health Phase-Out Report	Sewer Line Repair, Sierra Army Depot, Herlong, California	CAL, Inc. (for USACOE)	USACOE (Sacramento)	Nov-96
1996 - 19	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support*	Technical Memorandum, Soil Gas Monitoring Event No. 2	Montgomery Watson	USACOE (Sacramento)	Dec-96
1996 - 20	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support*	Letter Report, Surface and Near-Surface Soil Sampling	Montgomery Watson	USACOE (Sacramento)	Dec-96
1997 - 1	Sierra Army Depot, Lassen County, California; DRMO Trench Area Remedial Investigation/Feasibility Study	Draft Final Feasibility Study	Montgomery Watson	AEC (Aberdeen)	Jan-97

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1997 - 2	Final Report, Subsurface Soil Sampling Results, Underground Storage Tank Locations*	Herlong Reuse Parcel at Sierra Army Depot, Herlong, California. Vol. II of II	The Weiss Associates Team (for USACOE)	USACOE (Sacramento)	Jan-97
1997 - 3	Draft Final Phase I Field Operations Plan	Building 210 Area Engineering Evaluation and Cost Analysis Predesign Study, Sierra Army Depot, Lassen County, California	Harding Lawson Associates		Mar-97
1997 - 3a	Final Environmental Baseline Survey CERFA Report	Sierra Army Depot Ruse Parcels, Lassen County, California	Harding Lawson Associates	USAEC	Mar-97
1997 - 4	Revised Final Task Order (PRAC) TNT Leaching Beds Area Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	Apr-97
1997 - 5	Revised Final Task Order (PRAC) Diesel Spill Area Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	Apr-97
1997 - 5a	Base Realignment and Closure Cleanup Plan	Sierra Army Depot, Lassen County, California	Harding Lawson Associates	USAEC	Apr-97
1997 - 6	Task Order (SmART) Building 1003 Area Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	May-97
1997 - 6a	Task Order (SmART) Large Sewage Treatment Ponds Remediation	Sierra Army Depot, Lassen County, California	USACOE, Sacramento	USACOE (Sacramento)	May-97
1997 - 7	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support*	Technical Memorandum, Respiration Test No. 2	Montgomery Watson	USACOE (Sacramento)	Jun-97
1997 - 8	Sierra Army Depot, Installation Restoration Program	Proposed Plan for DRMO Trench Area at Sierra Army Depot	Sierra Army Depot		Jul-97
1997 - 9	Sampling and Analysis Plan, Large Sewage Treatment Ponds and Building 1003 Area Soil Remediation Projects	Sierra Army Depot, Herlong, California	CAL, Inc. (for USACOE)	USACOE (Sacramento)	Jul-97
1997 - 10	Investigation-Derived Waste Management, Phase I Field Operations	Building 210 Area Engineering Evaluation and Cost Analysis Predesign Study	Harding Lawson Associates		Jul-97

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1997 - 11	Final Field Sampling Design Plan *	Sierra Army Depot Group III Remedial Investigation and Feasibility Study, Lassen County, California	Harding Lawson Associates	USATHAMA (Aberdeen)	Sep-97
1997 - 12	Final Project Work Plan, TNT Leaching Beds Area Remediation	Sierra Army Depot, California	Kvaerner Environmental	USACOE (Sacramento)	Oct-97
1997 - 13	Sierra Army Depot, Lassen County, California; Abandoned Landfill and Southern Sites Area Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation, Volume I of III	Montgomery Watson	AEC (Aberdeen)	Dec-97
1997 - 14	Sierra Army Depot, Lassen County, California; Abandoned Landfill and Southern Sites Area Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation, Volume II of III	Montgomery Watson	AEC (Aberdeen)	Dec-97
1997 - 15	Sierra Army Depot, Lassen County, California; Abandoned Landfill and Southern Sites Area Follow-Up Remedial Investigation/Feasibility Study	Draft Final Remedial Investigation, Volume III of III, Appendices I-P	Montgomery Watson	AEC (Aberdeen)	Dec-97
1998 - 1	TNT Leaching Beds Area Remediation, Treatability Phase Report	Sierra Army Depot, Lassen County, California	Kvaerner Environmental	USACOE (Sacramento)	Jan-98
1998 - 2	Environmental Assessment for the Disposal and Reuse of the BRAC Parcels	Sierra Army Depot, California	USACOE (Mobile)	US Army Materiel Command	Feb-98
1998 - 3	Sierra Army Depot, Lassen County, California; DRMO Follow-Up Remedial Investigation/Feasibility Study	Final Record of Decision/Remedial Action Plan	Montgomery Watson	AEC (Aberdeen)	Mar-98
1998 - 4	Final Site Soil Closure Report, Building 1003	Sierra Army Depot, Herlong, California	CAL, Inc. (for USACOE)	USACOE (Sacramento)	Apr-98
1998 - 5	Close-Out Report, Existing Fire-Fighting Training Facility Debris Removal*	Sierra Army Depot, Lassen County, California	PSC Associates, Inc.	USACOE (Sacramento)	Apr-98
1998 - 6	Final Project Work Plan, Firing Range Berm	Sierra Army Depot, Herlong, California	CAL, Inc. (for USACOE)	USACOE (Sacramento)	May-98
1998 - 7	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support*	Technical Memorandum, Respiration Test No. 3	Montgomery Watson	USACOE (Sacramento)	Jun-98
1998 - 8	Field Sampling Plan	Old Popping Furnace, Sierra Army Depot, Lassen County, California	Harding Lawson Associates		Jun-98

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1998 - 9	Sierra Army Depot, Lassen County, California; TNT Leaching Beds Area Groundwater Monitoring Implementation	Draft Final Annual Groundwater Monitoring Report, 1997	Montgomery Watson	AEC (Aberdeen)	Jul-98
1998 - 10	TNT Leaching Beds Area Remediation	Sierra Army Depot, Lassen County, California, Closure Report, Paint Shop Subsite	Kvaerner Environmental (for USACOE)	USACOE (Sacramento)	Aug-98
1998 - 11	Draft Final DRMO Trench Area (Soils)	Sierra Army Depot, Herlong, California	USACOE, Sacramento	USACOE (Sacramento)	Oct-98
1998 - 12	Sierra Army Depot, Lassen County, California; Existing Fire-Fighting Training Facility, Bioventing System Sampling and Support*	Technical Memorandum, Confirmation Soil Sampling	Montgomery Watson	USACOE (Sacramento)	Nov-98
1998 - 13	Sierra Army Depot, Lassen County, California	Record of Decision/Remedial Action Plan, Seven Sites, Final, Explanation of Significant Difference	Montgomery Watson	AEC (Aberdeen)	Nov-98
1998 - 14	Sierra Army Depot, Lassen County, California; Abandoned Landfill and Southern Sites Area 1999 Follow-Up Remedial	Draft Final Sampling Plan	Montgomery Watson	AEC (Aberdeen)	Dec-98
1998-15	Draft Final 1997 Annual Groundwater Monitoring Report, TNT Leaching Beds Area	Sierra Army Depot, Lassen County, California	Montgomery Watson	USACOE (Sacramento)	Jun-05
1999 - 1	Pre-Excavation Field Sampling Analysis Results, DRMO Trench Area (Soils) Phase I	Sierra Army Depot, Herlong, California	USACOE, Sacramento	USACOE (Sacramento)	Jan-99
1999 - 2	Draft Final Report, Four Preliminary Sites	Sierra Army Depot, Herlong, Lassen County, California Vol I of II	USACOE, Sacramento	USACOE (Sacramento)	Feb-99
1999 - 3	Draft Final Report, Four Preliminary Sites	Sierra Army Depot, Herlong, Lassen County, California Vol II of II	USACOE, Sacramento	USACOE (Sacramento)	Feb-99
1999 - 4	TNT Leaching Beds Area Remediation	Sierra Army Depot, Lassen County, California, Closure Report, Vol. I of II	Kvaerner Environmental	USACOE (Sacramento)	Mar-99
1999 - 5	TNT Leaching Beds Area Remediation	Sierra Army Depot, Lassen County, California, Closure Report, Vol. II of II	Kvaerner Environmental	USACOE (Sacramento)	Mar-99

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
1999 - 6	DRMO Trench Area (Soils)	Sierra Army Depot, Herlong, California, Final Submittal	USACOE Sacramento	USACOE (Sacramento)	Jun-99
1999 - 7	Draft Final Field Sampling Design Plan, Upper Burning Ground Follow-on Remedial Investigation	Sierra Army Depot, Lassen County, California	Harding Lawson Associates	USACOE (Baltimore)	Sep-99
1999 - 8	Draft Final Building 210 Area Engineering Evaluation and Cost Analysis	Sierra Army Depot, Lassen County, California	Harding Lawson Associates	USACOE (Baltimore)	Oct-99
	Asbestos Survey for Sierra Army Depot, Lassen County, California	Sierra Army Depot, Lassen County, California		USACOE (Sacramento)	Oct-00
2000 - 1	Existing Fire-Fighting Training Facility, Final Site Closure Report	Sierra Army Depot, Lassen County, California	Montgomery Watson and Innovative Technical Solutions, Inc.	USACOE (Sacramento)	Jan-00
2001 - 2	Revised Final, Environmental Baseline Survey CERFA Report*	Sierra Army Depot, Lassen County, California	Harding ESE	AEC (Aberdeen)	Mar-01
2001 - 3	Draft Final Abandoned Landfill and Southern Sites Area, 1999 Follow-up Remedial Investigation, Volumes I & II	Sierra Army Depot, Lassen County, California	Harding ESE	USACOE (Baltimore)	Jun-01
2001 - 4	Final Upper Burning Ground Follow-on Remedial Investigation, Volumes I & II	Sierra Army Depot, Lassen County, California	Harding ESE	USACOE (Baltimore)	Aug-01
2002 - 1	Final Field Sampling Design Plan for the Old Popping Furnace Follow-on Remedial Investigation	Sierra Army Depot, Lassen County, California	Harding ESE	SIAD	Jul-02
2002 - 2	Final Abandoned Landfill and Southern Sites Area Work Plan	Sierra Army Depot, Lassen County, California	Harding ESE	SIAD	Jul-02
2002 - 3	Final Building 210 Area Enhanced Biodegradation Pilot Study Work Plan	Sierra Army Depot, Lassen County, California	Harding ESE	SIAD	Jul-02
2002 - 4	Final Building 210 Area Pre-Design Plume Assessment Work Plan	Sierra Army Depot, Lassen County, California	Harding ESE	SIAD	Jul-02
2002 - 5	Final Abandoned Landfill and Southern Sites Area Groundwater Plume Delineation in the Area of Potable Supply Well PSW-02 Work Plan	Sierra Army Depot, Lassen County, California	Harding ESE	SIAD	Jul-02
2002 - 6	Final Upper Burning Ground Groundwater Evaluation Work Plan	Sierra Army Depot, Lassen County, California	Harding ESE	SIAD	Jul-02
2002 - 7	Final Upper Burning Ground and Old Popping Furnace - Additional Data Collection Work Plan	Sierra Army Depot, Lassen County, California	Harding ESE	SIAD	Jul-02

Previous Studies

Year	Full Title		Author	Issuing Agency	Date
2002 - 8	Final Abandoned Landfill and Southern Sites Area Plume Migration Assessment Work Plan	Sierra Army Depot, Lassen County, California	Harding ESE	SIAD	Jul-02
	Ordnance and Explosive Engineering Evaluation/Cost Analysis(EE/CA), Honey Lake Area	Sierra Army Depot, Lassen County, California	Earth Tech	USACOE (Sacramento)	Jul-02
2002 - 9	Final Building 210 Area Zero-Valent Iron Pilot Study, Follow-on Enhanced Biodegradation Pilot Study and Additional Data Collection Work Plan	Sierra Army Depot, Lassen County, California	Harding ESE	SIAD	Jul-02
2004 - 1	Final Focused Feasibility Study for the Upper Burning Ground	Sierra Army Depot, Herlong, California	ARCADIS	SIAD	Apr-04
2004 - 2	Final Focused Feasibility Study for the Equipment Yard	Sierra Army Depot, Herlong, California	ARCADIS	SIAD	Apr-04
2004 - 3	Final Old Popping Furnace Area Remedial Investigation and Feasibility Study	Sierra Army Depot, Herlong, California	ARCADIS	SIAD	Apr-04
2004 - 4	Proposed Plan for Three Sites	Sierra Army Depot, Herlong, California	ARCADIS	SIAD	Apr-04

* Documents are related to the BRAC Program

Sierra Army Depot
ER,A Active Sites

SIAD - 001
TNT LEACHING BEDS AREA

SITE DESCRIPTION

SIAD-001 is the TNT Leaching Beds Area, comprised of the TNT Leaching Beds Subsite (SIAD-001A) and the Paint Shop Subsite (SIAD-001B).

The TNT Leaching Beds Subsite (TLB) consists of two former TNT leaching beds used for disposal of wastewater from the ammunition shell dismantling and washout facility. The two leaching beds were unlined shallow depressions ~50 x 50 ft and 50 x 100 ft in size. The water used to flush out explosives was transported through a concrete trench leading to the TNT leaching beds where it was allowed to evaporate and infiltrate the soils. The washout facility was in operation from 1940 to 1949 and at maximum capacity could process and reclaim TNT from eight hundred 105mm shells per day.

STATUS

RRSE RATING: High

CONTAMINANTS: Explosives (2, 4, 6 TNT; 1, 3, 5 TNB), VOCs

MEDIA OF CONCERN:
Groundwater

COMPLETED IRP PHASE:
PA/SI, RI/FS, RD,RA

CURRENT IRP PHASE:
PBC

FUTURE IRP PHASE:
PBC

The RI/FS was completed in 1993, and identified contamination in the soil and groundwater. The ROD was signed in September, 1995. The selected remedy includes composting of explosives contaminated soils, institutional controls and natural attenuation for the groundwater contamination.

LTM started in 1996.

The composting action was started in December 1997 and was completed in December 1998. Final site soil closure report was approved by State regulators in FY99. CERCLA reviews were started in 2001.

PROPOSED PLAN

In summer 2004, the In situ Reactive Zone (IRZ) demonstration program will be implemented to evaluate enhancement of TCE degradation in groundwater.

The next CERCLA review will be in 2006.

SIAD - 002
DRMO TRENCH AREA

SITE DESCRIPTION

The Defense Reutilization and Marketing Office (DRMO) Trench Area consisted of an open trench ~290 x 40 x 10 ft deep, the Burn and Debris Area and the Active DRMO Yard.

The trench was used for the disposal of wood pallets, cardboard tubing, waste oil, sludge, and solvents. The site was used extensively from 1942 to 1973 and in limited capacity from 1973 to 1987. Between 1942 and 1973, ~190 liters per day of waste oils, sludge, solvents, and cleaning fluids from the vehicle maintenance activities were disposed of and burned in the DRMO Trench Area.

The RI/FS was completed in February 1997. The ROD was signed in March 1998.

The Burn and Debris area had soil removed for off-site disposal in December of 1999, therefore, metals are no longer a contaminant of concern.

STATUS

RRSE RATING: High

CONTAMINANTS:

SVOCs, VOCs, TCE, POL

MEDIA OF CONCERN:

Soil, Groundwater

COMPLETED IRP PHASE:

PA/SI, RI/FS, RD, RA

CURRENT IRP PHASE:

PBC

FUTURE IRP PHASE:

PBC

Groundwater contamination is monitored to assess natural attenuation. Five additional groundwater monitoring wells were installed in FY00.

Soil vapor extraction (SVE) and bioventing within the open trench and a portion of the Active Yard began operation in September of 2000.

PROPOSED PLAN

In summer 2004, implement an IRZ demonstration program to evaluate enhancing biodegradation of TCE in groundwater. Continue to operate SVE for soils and LTM.

The next CERCLA review will be in 2006.

SIAD - 003
ABANDONED LANDFILL AND THE SOUTHERN SITES

SITE DESCRIPTION

SIAD-003 is made up of the Abandoned Landfill and the Southern Sites Area.

The Abandoned Landfill (ALF) was used as the main disposal area for SIAD domestic wastes from the early 1940s to 1965. The primary method of disposal was waste burning followed by spreading and burning of the resulting residue. The ALF is a trench type landfill with no liner or leachate collection system. The dimensions of this site are approximately 1,600 by 1,500 ft (approximately 55 acres).

The Southern Sites Area (SSA) is located south of the ALF and north of the potable supply wells PSW-02 and PSW-08. This area includes the Equipment Yard, Equipment Maintenance Yard, Fuel Sump Area, Former Officer's Club Pool and Wash Rack Area. Some of these areas are still active, however; the contamination is from past activities.

STATUS

RRSE RATING: High

CONTAMINANTS: SVOCs, VOCs, Pesticides (DDT, DDE, DDD), TPH

MEDIA OF CONCERN:
Soil, Groundwater

COMPLETED IRP PHASE:
PA/SI

CURRENT IRP PHASE:
PBC

FUTURE IRP PHASE:
PBC

The RI/FS began in 1990. Groundwater under the ALF and the SSA is contaminated with TCE and TPH and the Equipment Yard is contaminated with pesticides in soil. The Equipment Yard has been addressed in a separate FFS.

Because of previous TCE detections, monitoring of potable supply wells is ongoing.

In FY03, a preliminary GW model and a slug/pump test were completed, and six new guard wells were installed.

Perchlorate was detected (8 ppb) in well ALF-05-MWA in Jan 2003, however, downgradient wells and adjacent wells did not detect perchlorate. There have been no perchlorate detections since.

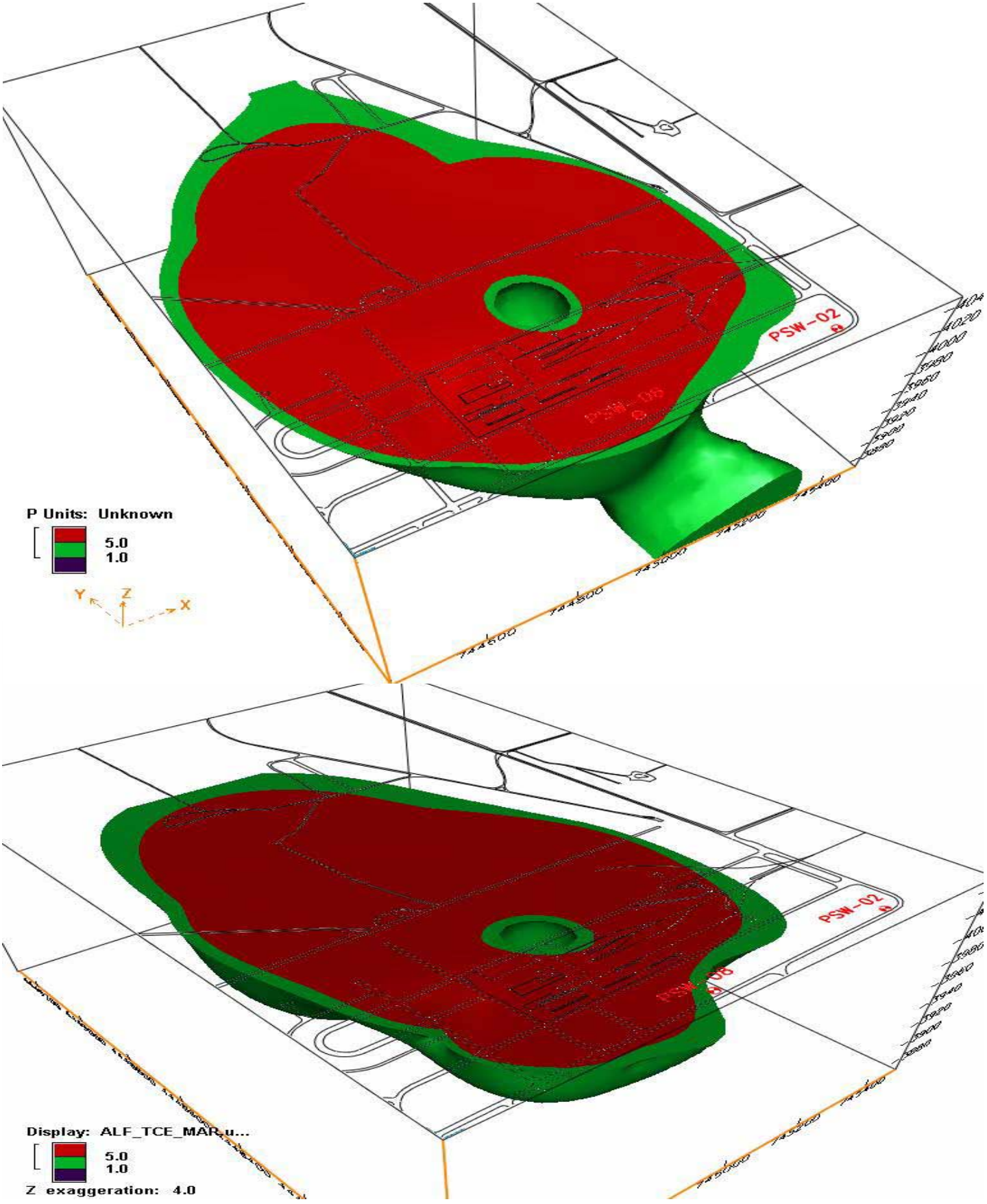
PROPOSED PLAN

In summer 2004, implement an in situ reactive zone (IRZ) pilot study to support the FS (expected to be completed in FY05).

The Equipment Yard is included in the Three Sites ROD and is expected to be completed in 2004. The proposed soil remedy for the Equipment Yard is "hot spot" removal and off-site disposal (expected in FY05).

Groundwater monitoring will continue to assess contaminant concentrations.

SIAD - 003
ABANDONED LANDFILL AND THE SOUTHERN SITES



SIAD - 010
HANSENS HOLE, UPPER BURNING GROUND

SITE DESCRIPTION

The Upper Burning Ground (UBG) is a 4,030 acre area located north of the main depot. The site was used to burn primers, fuses, propellants, pyrotechnics, flare materials, and high explosives that could not be detonated. The site was also used as an open demolition area.

Six past activity sub-areas comprise the UBG site. These sub-areas are: Hansen's Hole; Old Demolition Area; Open Trenches and Ash Pile; and the north and south extension of the Upper Burn Area and the Lower Burn Area.

The RI work at these six sub-sites began in 1990. Additional RI work was completed in FY01.

The RI has identified metals contamination in the soil and the groundwater contains naturally occurring arsenic at high concentrations.

STATUS

RRSE RATING: High

CONTAMINANTS:

Explosives, Metals

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

PBC

FUTURE IRP PHASE:

PBC

Production activities stopped in Sept 2001. SIAD withdrew the RCRA Part B Permit in May 2003 and is currently negotiating with the State for closure requirements. Burn activities at the Demolition Area and Lower Burning Area are allowed on an emergency basis only.

The FFS was finalized in FY03.

PROPOSED PLAN

The PP and ROD are expected to be completed in 2004.

Surface OE/UXO in Hansen's Hole will be removed and a CAMU will be constructed to accept contaminated soil from the other Upper Burning Ground sites.

The CAMU will require long-term maintenance.

SIAD - 014
BUILDING 210 AREA

SITE DESCRIPTION

The Building 210 Area is located near the southeast corner of SIAD and includes the areas adjacent to Buildings 208, 209 and 210.

Bldg 210 was used as a vehicle maintenance facility from 1942 until 1949. A popping furnace was installed in 1949 and was used for the demilitarization of small-arms ammunition during the 1950s and 1960s and was deactivated by 1979. Additional activities included sand blasting, spray painting, steam cleaning, powder packaging, and tank engine fogging. Wastes generated at this site included degreasing solvents, oils, sludge, and residues from the popping operations.

Buildings adjacent to Bldg 210 were used for vehicle maintenance from the 1940s until 1973.

STATUS

RRSE RATING: Medium

CONTAMINANTS:

TCE

MEDIA OF CONCERN:

Groundwater

COMPLETED IRP PHASE:

PA/SI, RI

CURRENT IRP PHASE:

PBC

FUTURE IRP PHASE:

PBC

RI was completed in 1995 and indicated TCE contamination up to 1,800 ppb in groundwater that has migrated off-post to the south. Approximately 50 acres of land off-post have been impacted by groundwater contamination.

An EE/CA was completed in FY00. An interim groundwater pump and treat system was installed and began operation in FY00. This is planned to operate until the final remedy is implemented.

Numerous pilot studies have been completed at this site including zero-valent iron and enhanced bioremediation.

PROPOSED PLAN

In summer 2004, implement an in situ reactive zone (IRZ) pilot study to support the FS. The FS will incorporate data from the pilot studies and the groundwater treatment study and should be completed in FY05.

As the RA is implemented, the operation of the pump and treat may be decreased, assuming the RA treatment is effective.

SIAD - 020
1960 DEMOLITION AREA

SITE DESCRIPTION

The 1960 Demolition Area is located in the northern portion of SIAD. The site is ~1,700 x 2,000 ft (approximately 80 acres). This area was developed during the 1960s when the UBG demolition area was closed for construction. During 1960-1961, a group event of 36, 500-pound bombs were detonated at a rate of 12 groups per day (432 bombs per day). Some of the metal fragments from this activity remain on the surface today.

CS tear gas grenades were also detonated at a rate of 200 to 248 pounds per day for a 3 month period in 1961. During the 1970s, NIKE Hercules XM-30 mortars were fired in silos on the site. The solid-based propellant was burned in the silos during the firings. Approximately 24 surface depressions (trenches) created by detonated bombs are located at the 1960 Demolition Area. A review of aerial photographs indicate that the trenches are 300-500 feet long, 150 feet wide and up to 20 feet deep.

The RI/FS was completed in 1996. This site was included in the Nine Sites ROD signed in October 1996.

This site is associated with MMRP site SIAD-007-R-01.

STATUS

RRSE RATING: High

CONTAMINANTS:

UXO, Metals, Explosives, CS Tear Gas

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

PA/SI, RI/FS

CURRENT IRP PHASE:

PBC

FUTURE IRP PHASE:

PBC

PROPOSED PLAN

The selected action is access restrictions with institutional controls and signage. This is expected to be completed in FY05. The institutional controls will be documented in the Installation Master Plan.

SIAD - 022
OLD POPPING FURNACE

SITE DESCRIPTION

The Old Popping Furnace was located in the northeast corner of the Main Depot and encompassed a small area just west of the entrance of the Lower Burning Ground (SIAD-010). The site is ~1,000 x 1,000 ft (23 acres). This area was used during the 1950s for the demilitarization of small-arms ammunition. Some of the metal fragments from this activity remain on the surface today. In accordance with regulatory requirements at the time, this furnace was operated without air emissions controls, and contamination spread over approximately 15 acres.

The RI indicated elevated concentrations of metals (primarily lead) in soil and elevated concentrations of naturally occurring arsenic in groundwater. The RI/FS was finalized in 2004.

STATUS

RRSE RATING: High

CONTAMINANTS:

Metals

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

PA/SI, RI/FS

CURRENT IRP PHASE:

PBC

FUTURE IRP PHASE:

PBC

PROPOSED PLAN

The Three Sites PP and ROD are expected to be completed in 2004. The proposed remedy is to consolidate lead-contaminated soil into a CAMU. LTM will be required.

SIAD - 058
SIAD SPILL AREAS (FINAL ROD SITES)

SITE DESCRIPTION

This AEDB-R site was opened to address an installation-wide ROD, well abandonment and an installation-wide groundwater monitoring plan.

PROPOSED PLAN

The installation-wide ROD is expected to be completed in 2008.

STATUS

RRSE RATING: High Risk

CONTAMINANTS:

TCE, Explosives

MEDIA OF CONCERN:

Groundwater, Soil

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

PBC

FUTURE IRP PHASE:

PBC

Sierra Army Depot
MMRP Sites

SIAD-006-R-01
.50 CALIBER FIRING RANGE

The range fan for the.50 Caliber Firing Range, was shortened in 1997 to function as an active 7.62 mm range, leaving a closed section of the range fan that qualifies as CTT. Because a map of the new 7.62 mm range fan was unavailable, the size of the range fan was estimated based on current regulations. The range fan for the .50 Caliber Range extends from east to west, with the furthest extent of the range fan situated on property that has been transferred to the Lassen Reuse Authority under BRAC. The BRAC property is not included in the estimated acreage listed for this site. The majority of this range is covered by Honey Lake Demolition Range C. This range was used from approximately the 1960's to 1997. No known munitions response actions or clearances have been conducted at this site. The size of this site has been estimated at approximately 5 acres. The area is currently undeveloped. [Note: There is a second .50 Caliber Range associated with SIAD. It extends north to south and lies completely within the boundaries of the BRAC property.

SIAD-007-R-01
1960 DEMOLOTION AREA

This closed site is located in the west-central portion of the Main Depot. According to a 1994 Remedial Investigation Report, this site consists of a large rectangular area measuring approximately 3,000 feet by 2,000 feet, containing 24 elongated surface depressions (trenches) arranged in two rows, which were created by detonated bombs. The depressions have very steep-sided berms, devoid of vegetation, that are deep, incised by erosional gullies. An abundance of scattered metal debris, including jagged pieces of steel bomb fragments, lies on the surface of the site.

This site was developed in 1960 when the Upper Burning Ground demolition area was closed for construction. During 1960 and 1961, thirty-six 500-pound bombs (per detonation), were detonated at a rate of 12 times per day (432 bombs per day). CS tear gas grenades were also detonated at a rate of 200 to 248 pounds per day for a three-month period in 1961. During the 1970's, NIKE Hercules XM-30 motors were fired in silos on the site. The solid-based propellant was burned in the silos during the firings. The RI/FS for this site was completed in 1996. Contaminants of Concern included UXO, metals, explosives, and CS tear gas. RDX was also detected in surface soils. Although the IRP did address UXO for the portion of the site discussed in the IAP, only a visual inspection was conducted, the UXO was not removed and the cost to complete did not include UXO. This site was included in the Nine Sites ROD signed in October 1996. According to the DSERTS database information provided by AEC, the IRP phase for this site is Remedial Action (Construction). The site will be fenced in Fall/Winter 2004. The size of this site has been estimated at approximately 80 acres. The site is currently undeveloped.

SIAD-008-R-01
BLOCK C

In 1978, there was an accidental explosion of ten BLU-82/b [Daisy Cutter] bombs, which had been placed on metal helicopter matting, in a bermed area, located in the south-central portion of the Main Depot Area.Each bomb contained 5,715 kg of explosives (ammonium nitrate slurry). The explosion damaged both igloos 707 and 708 and they were eventually demolished. At the time of the explosion, it was noted that all of the items had exploded. No UXO investigations or clearances have been conducted at this site. It was determined that there would have been no kick-out of UXO and no UXO would remain at the site because it is known that all of the bombs were completely detonated in the accident. Although the actual site of the explosion is undeveloped, it is surrounded by storage igloos. The size of this site has been estimated at approximately 0.62 acres.

SIAD-009-R-01
HAZARDOUS CLASSIFICATION TEST SITE

This closed site in the eastern portion of the Main Depot Area was also known as an ammunition hazard test site. A small portion of this site is covered by the range fan of an active 7.62 mm range. A larger portion covering the northwest corner of the range falls within the boundary of Honey Lake Demolition Range C (Range C). The munitions used in Range C take precedence over hose used at this site; consequently, the overlapping acreage is included with Range C. According to a 1979 Installation Assessment, this area was used to blow/burn 8-inch, 40mm, 135mm, CBU (cluster bombs), and other conventional munitions for test purposes. According to a 1983 Reassessment report, activities conducted at this site were designed to evaluate the fire capabilities and disposal procedures for improved conventional weapons. The hazard test site was used approximately three to four months per year, and all metal generated during the operations was collected and sent to the Defense Property Disposal Office for disposal. SIAD staff stated that cluster bombs were demolished at this closed site from 1969-1973 and the site is heavily contaminated with scrap metal. The site is locked near a road, which had been transferred to the state under BRAC. Under the IRP, a Site Investigation and a Remedial Investigation/Feasibility Study have been completed for this site. According to SIAD, the EPA has conducted a walkthrough at the site and determined that the site did not warrant any further investigation. The site is considered to be Response Complete and is currently undeveloped. Although the area is not fenced at this time, there are plans to build a fence around its perimeter in the near future. The size of this site has been estimated at approximately 163 acres.

Sierra Army Depot
Response Complete Sites

SIAD - 001(B)
PAINT SHOP SUBSITE

SITE DESCRIPTION

SIAD-001 is the TNT Leaching Beds Area, comprised of the TNT Leaching Beds Subsite (SIAD-001A) and the Paint Shop Subsite (SIAD-001B).

The Paint Shop Subsite (PS) is within the western portion of the TNT Leaching Beds Area (SIAD-001). A building near the subsite was used as a paint shop from the 1940s to the mid-1950s. Liquids typically used for painting such as paint sludges, and solvents were discharged to the soils in the immediate area. A concrete trough that extends eastward from the building foundation likely carried wastes to a dry well about 200 feet east of the concrete pad.

The RI/FS was completed in 1993, and identified contamination in the soil and groundwater. The ROD was signed in September, 1995. The selected remedy includes soil removal with off post disposal, institutional controls and natural attenuation for the groundwater contamination.

STATUS

RRSE RATING: High

CONTAMINANTS:

SVOCs, TCE, Carbon Tetrachloride; 1, 2-dichloroethane; Chloroform

MEDIA OF CONCERN:

Soil, Groundwater

COMPLETED IRP PHASE:

PA/SI, RI/FS, RD, RA

CURRENT IRP PHASE:

PBC

FUTURE IRP PHASE:

PBC

LTM started in 1996.

Final site soil closure report was approved by State regulators in FY99.

Continue LTM to assess the progress of natural attenuation. CERCLA five year reviews will be started in 2001.

All funding for this site will be addressed under SIAD-001(A).

SIAD - 004
CONSTRUCTION DEBRIS LANDFILL

SITE DESCRIPTION

The Construction Debris Landfill is an area that has been used for dumping of concrete, asphalt and construction rubble. This site was in operation from the early 1940s until closure in 1988. Because this site is within close proximity to the ALF and the landfill trenching procedures at both sites are similar, these sites were grouped together for investigation purposes.

The Nine Sites ROD (Oct 1996) identified NFA.

STATUS

RRSE RATING:
Low
CONTAMINANTS:
None
MEDIA OF CONCERN:
None
COMPLETED IRP PHASE:
PA/SI, RI
CURRENT IRP PHASE:
RC

SIAD - 005
CHEMICAL BURIAL SITE

SITE DESCRIPTION

The Chemical Burial Site is a 100 x 600-foot area located within the Construction Debris Landfill. The site was used from January 1971 to October 1972 for trench burial of retrograde drummed chemicals. In 1974, the drums were excavated and removed and the trench was backfilled. During removal and excavation, all drums were observed to be intact. Based on this observation, the chemicals were believed to be completely contained within the drums and the area was believed to be uncontaminated. Because the Chemical Burial Site is located within the Construction Debris Landfill and in close proximity to the ALF, these sites were grouped together for the purposes of investigation. The site has not demonstrated any contamination and is identified as a NFA site in the Nine Sites ROD (Oct 96).

STATUS

RRSE RATING:
Low
CONTAMINANTS:
None
MEDIA OF CONCERN:
None
COMPLETED IRP PHASE:
PA/SI, RI
CURRENT IRP PHASE:
RC

SIAD - 009
AMMUNITION DEMILITARIZATION AND RENOVATION AREA

SITE DESCRIPTION

Operations carried out at the Ammunition Demilitarization and Renovation Area (ADRA) included ammunition pull-apart, repacking, and painting. Wastes generated were primers, charges, waste rags, paints, and solvents. Each platform located at the ADRA contained a floor drain that led to a below-ground drainage pipe, septic tank, and leach field south of the platforms. It is possible that small quantities of munitions compounds were washed down the drains.

The Nine Sites ROD (Oct 1996) for this site recommends no further action due to the very low levels of contaminants detected.

STATUS

RRSE RATING:
Medium
CONTAMINANTS:
TCE, Explosives in low levels
MEDIA OF CONCERN:
Soil
COMPLETED IRP PHASE:
PA/SI, RI/FS
CURRENT IRP PHASE:
RC

SIAD - 011
DIESEL SPILL AREA

SITE DESCRIPTION

A diesel oil spill was discovered at the southwest corner of Building 403 in March 1987. The spill was the result of a leak in a pipe that led from the underground storage tank located directly south of Boiler Plant No. 3 to a small boiler in Bldg 403. During 1987, the spill area was excavated to 30 feet deep and backfilled with clean soil. The amount of diesel oil spilled is estimated at 5,000 gallons.

The underground storage tanks were removed August 1990.

The recommended remedial alternative in the Seven Sites ROD (Sept 1995) was in-situ bioventing for soils and a dual phase extraction technique for contaminated groundwater. After the ROD was signed, additional information revealed that the initial investigation overstated the extent of the groundwater contamination.

STATUS

RRSE RATING:
Low
CONTAMINANTS:
TPH-Diesel, SVOCs
MEDIA OF CONCERN:
Soil
COMPLETED IRP PHASE:
PA/SI, RI/FS, RD, RA
CURRENT IRP PHASE:
RC

An Explanation of Significant Difference was completed in December 1998, which eliminated the requirement for groundwater remediation.

Bioventing system began operation in FY00 and completed in summer 2002. Clean-up goals were met.

SIAD - 012
BUILDING 1003 AREA

SITE DESCRIPTION

Waste oil spilled at a Texaco gas station (Building 1003) was transported through a storm drain to an area north of Susanville Road. The waste oil spill was discovered in January 1988. The spill, which is estimated to have occurred over a 20 to 24-month period, is estimated at 900 gallons of waste oil. The spill was the result of a clogged oil-water separator that diverted waste oil from the underground storage tank to the storm drain. Waste oil flowed north under Susanville Road and discharged into a gentle sloping drainage area.

The Nine Sites ROD (Oct 1996) recommended soil removal and recycling which was completed in April 1998. The final closure report was approved in June 1998.

STATUS

RRSE RATING:
Medium
CONTAMINANTS:
TPH, Lead
MEDIA OF CONCERN:
Soil
COMPLETED IRP PHASE:
PA/SI, RI
CURRENT IRP PHASE:
RC

SIAD - 013
OLD FIRE-FIGHTING TRAINING AREA

SITE DESCRIPTION

The Old Fire-Fighting Training Facility is located at the southern boundary of SIAD. The site was originally a paved and bermed ice skating rink with an aerial extent of approximately 2,200 square yards. The site was also used as a tennis court. The site may have been used as fire-fighting training facility in the early 1960s; however, this is speculative because there is no documentation to support this contention.

STATUS

RRSE RATING:
NE
CONTAMINANTS:
None
MEDIA OF CONCERN:
None
COMPLETED IRP PHASE:
PA/SI, RI/FS
CURRENT IRP PHASE:
RC

SIAD - 015
LARGE SEWAGE TREATMENT PONDS

SITE DESCRIPTION

The Large Sewage Treatment Ponds are located in the south-central portion of SIAD. The site contains four unlined and two lined ponds used for sewage treatment. The unlined ponds occupy an area 600 x 600 feet, and the two polyethylene lined ponds occupy an area 500 x 1,000 feet. Three of the unlined ponds were used from 1941 to 1971, and the lined ponds have been in use from 1971 to the present. Also, one unlined pond is in use for effluent overflow. Sewage treatment ponds receive primarily sanitary sewage, although small quantities of industrial wastes from wash sinks and shop floor drains are received occasionally. Sewage treatment in the unlined ponds was by evaporation and percolation into the underlying soil.

The Nine Sites ROD (Oct 1996) recommended removal of PCB contaminated soil with off site disposal at a permitted facility. The final closure report was approved in June 1998.

STATUS

RRSE RATING:
Low
CONTAMINANTS:
Metals, PCB
MEDIA OF CONCERN:
Soil
COMPLETED IRP PHASE:
PA/SI, RI/FS, RD, RA
CURRENT IRP PHASE:
RC

SIAD - 016
LOWER BURNING GROUND

SITE DESCRIPTION

The Lower Burning Ground (LBG) is located near the northeast corner of SIAD. The LBG was used from 1946 to the late 1980s for burning munitions and various pyrotechnics, both in pits and on the ground surface. Interim Burning Area A, located in the southern portion of the LBG area, was used in 1960 and 1961 and may have been used until 1974. Materials such as explosives, waste products generated during demolition operations, primers, charges, waste rags, paint sludge, solvents, powder projectiles, and other munitions are reported to have been dumped at the LBG. Most of the burning at the LBG was done in the pits which have been backfilled and covered. The LBG contains a trench 200 x 35 x 10 feet deep where demilitarization and industrial wastes have been burned or dumped.

The RI/FS was completed in 1996. This site was included in the Nine Sites ROD signed in October 1996.

The selected action will be access restrictions through adding institutional controls to the Installation Master Plan.

This site is associated with MMRP site SIAD-012-R-01.

STATUS

RRSE RATING:
Medium
CONTAMINANTS: UXO, Explosives, Metals, TPH, Organics
MEDIA OF CONCERN:
Soil
COMPLETED IRP PHASE:
PA/SI, RI/FS
CURRENT IRP PHASE:
RC with institutional controls

SIAD - 017 & 018
NIKE MISSILE FUEL DISPOSAL SITE A & B

SITE DESCRIPTION

The Nike Missile Fuel Disposal Site A and Nike Missile Fuel Disposal Site B are located in the northwest portion and west-central portion of SIAD respectively. These sites cover an area of ~900 x 900 feet each and were used for disposal of fuel components from Nike Ajax Missiles. The fuel disposal activities at this site included the burning of aviation gasoline (JP-4) in shallow pits measuring 10 x 10 x 1.6 feet deep and the evaporation of inhibited red-fuming nitric acid in small aluminum dishes adjacent to the burning pits.

The RI/FS was completed in June 1994. This site was included in the Seven Sites ROD signed in September 1995.

STATUS

RRSE RATING:
NE
CONTAMINANTS:
None
MEDIA OF CONCERN:
None
COMPLETED IRP PHASE:
PA/SI, RI/FS
CURRENT IRP PHASE:
RC

SIAD - 019
TOXIC STORAGE BUILDING 578

SITE DESCRIPTION

The Toxic Storage Building 578 is located in the west-central portion of SIAD. The site includes the area surrounding the building. Buildings 578 and 577 (also included in this site) are small, one-story warehouses with concrete slab floors. The floors of these buildings contain drains that extend beneath the buildings and to outside gravel covered drainage areas. It was reported that titanium tetrachloride was stored in Bldg 578 at one time. In addition, two pallets of cyanide in glass bottles were being stored in Bldg 577. During transfer and storage, a one quart spill of cyanide may have occurred at Bldg 578.

The RI/FS was completed in June 1994. This site was included in the Seven Sites ROD signed in September 1995.

STATUS

RRSE RATING:
NE
CONTAMINANTS:
None
MEDIA OF CONCERN:
None
COMPLETED IRP PHASE:
PA/SI, RI/FS
CURRENT IRP PHASE:
RC

SIAD - 059
THE UNIDENTIFIED PIT

SITE DESCRIPTION

The Unidentified Pit is located in the southwest portion of the installation outside the installation access control fence. This pit, ~100 feet in diameter, was observed during a helicopter flight in 1989. The pit was probably used as a stock tank to supply cattle with water. A shallow trench leads from the pit to Honey Lake.

The RI/FS was completed in June 1994. This site was included in the Seven Sites ROD signed in September 1995.

The selected remedy is to collapse surrounding berms into the pit followed by no further action.

Action is funded, but unable to complete action until water level decreases.

STATUS

RRSE RATING:
Low

CONTAMINANTS:
None

MEDIA OF CONCERN:
Soil, Groundwater

COMPLETED IRP PHASE:
PA/SI, RI/FS

CURRENT IRP PHASE:
RC

OTHER RC AEDB-R SITES

SAID-024	Ammunition Hazard Test Site	199008
SIAD-025	“K” Block Area	199008
SIAD-026	Ammo Maintenance Bldg #640	199008
SIAD-027	Abandoned Landfill #2	199008
SIAD-028	Transformers-250 On Installation	199008
SIAD-029	Hospital Bldg #150	199806
SIAD-031	Storage Silos	199008
SIAD-032	Building #T-79	199008
SIAD-033	Possible Burial Site	199008
SIAD-034	Septic Tanks/Leach fields	199008
SIAD-035	Storage Igloos (8)	199008
SIAD-036	BLDG 75 & 79 Area	199008
SIAD-037	Diesel Sump Area	199611
SIAD-038	Northwest Warehouse Area	199902
SIAD-039	Small Sewage Treatment Ponds	199908
SIAD-042	SW-Area	199903
SIAD-056	Strategic Ore Piles	199902
SIAD-057	Installation-Wide GW Plume	199911

SIERRA ARMY DEPOT BRAC AEDB-R SITES

SAID-006	Comp-Honey Lake-UXO	1995
SIAD-007	Existing Fire Fighting Training Facility	1995
SIAD-013	Old Fire-Fighting Training Facility	1995
SIAD-023	Comp Surveillance Test Range	1995
SIAD-030	Rifle/Pistol Range	1995
SIAD-041	Compliance DU Igloos	1995
SIAD-044	Range Lead/Debris Airstrip Area	1995
SIAD-045	Airstrip Diesel Spill	1995
SIAD-046	Compliance DU Storage Areas	1995
SIAD-051	Compliance Asbestos BRAC Parcel	1995
SAID-059	Honey Lake	1995

SIAD - 007
EXISTING FIRE-FIGHTING TRAINING FACILITY

SITE DESCRIPTION

The Existing Fire-Fighting Training Facility (EFFTF) is located at an old auto racetrack in the southwest portion of SIAD. The site was used to train SIAD fire control personnel and was in operation from 1968 to mid-1987. Once or twice per year, about 400 gallons of diesel fuel were burned on site during training sessions. The fuel used for training was distributed to the EFFTF through metal pipes from an above ground storage tank. Diesel fuel was the predominant fuel burned; however, gasoline and waste oil may also have been used.

The FS was completed in 1992 and the ROD was signed in 1994. A bioventing system was constructed in April 1994 and was operated until January 1999.

This site was moved to the BRAC list in 1997.

The bioventing system was decommissioned in February 1999. Following removal of surface soil in FY99, site remediation was completed. All remedial actions have been completed and approved. The property was transferred to U.S. Bureau of Prisons in 2001.

STATUS

RRSE RATING:
Medium

CONTAMINANTS:
TPH

MEDIA OF CONCERN:
Soil

COMPLETED IRP PHASE:
PA/SI, RI/FS, RD, RA

CURRENT IRP PHASE:
RC

SIAD - 006
HONEY LAKE

SITE DESCRIPTION

Honey Lake is a 60,000 acre intermittant lake. It has had ~5-15 feet of water since 1994 and it is currently dry.

Honey Lake was acquired by the Army Air Corp in 1933 for use as a bombing range, although it was never used as one. From 1933 to 1935, Honey Lake was used for aerial training with small-arms ammunition. During the 1940s and 50s, the site was used as a surveillance test site and for demolition of munitions. From February through May 1946, a weekly shipment of about 265 tons of ammunition, mainly 105mm shells, was detonated at the site. Aerial photographs taken in 1954 show areas of heavy cratering in approximately 1,300 acres of the eastern-most portion of the lake bed. Due to the past demolition and training activities, unexploded ordnance are present at this site.

STATUS

RRSE RATING: NE

CONTAMINANTS:

UXO & OE

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

PA/SI, RI

CURRENT IRP PHASE:

RC with ER,A program

FUTURE IRP PHASE: RC

An UXO investigation was completed in May 1993. BRAC funded geophysical surveys of the east shore area in 1999 and 2000, found significant amounts of scrap metal and OE.

Honey Lake is listed in the Federal Facilities Site Remediation Agreement (FFSRA).

In FY03, approximately 55,000 acres of the lake bed that are not contaminated with ordnance related materials were transfered to the Honey Lake Conservation Team. Approximately 5,000 acres of the lake bed that is contaminated with ordnance related materials was leased to the Honey Lake Conservation Team in FY03. Also, in FY03, a time critical surface UXO removal was completed.

It is listed as BRAC in AEDB-R.

Ordnance related remedial actions are expected to start in 2004. It is anticipated that after cleanup the property will be transfered to the state of California.

PAST MILESTONES

1988

MEP October

1989

IRP Public Participation Plan April

1991

RI Group I September
Federal Facility Site Remediation Agreement September

1992

RI Group II July
FS Group II EFFTF (SIAD-007) December

1993

RI Group I Follow-up April
FS Group II EFFTF (SIAD-007) April
FS TNT Leaching Beds Area and
Diesel Spill Area- Soil (SIAD-001, 011) May
PP Group II EFFTF (SIAD-007) July
FS TNT Leaching Beds Area and Diesel Spill Area- Groundwater April

1994

Diesel Still Area FS (SIAD-011) March
RIP for EFFTF (SIAD-007) April
PP Group I & III A Sites "Seven Sites" (TNT, DSA, & Group IIA Sites) May
RI Group III A Sites (OFT, FDA, FBA, TSA, UDP) June
RI Group III B Sites (STP, LBG, DMA) June
ROD Group II EFFTF (SIAD-007) September
RI Group I & II Follow-up (ADRA & B1003) December

1995

FS Group III B Sites April
FS Group I & II Follow-up Sites April
RI Group I Follow-up Continuation (DRMO & ALF) May
PP (ADRA) May
RI Group III C Site (B210) September
ROD "Seven Sites" September

1996

FS Building 1003 (SIAD-012) February
RIP for TNT Leaching Beds Area - Groundwater (SIAD-001) February
DRMO Trench Area Follow-Up RI (SIAD-002) June
Nine Sites ROD October

1997

DRMO Trench Area FS January
RI/FS Old Popping Furnance (SIAD-022) February

PAST MILESTONES

PP for DRMO (SIAD-002) July
RIP for TNT Leaching Beds Area - Soil (SIAD-001) December

1998

ROD for DRMO Trench (SIAD-002) March
Large Sewage Treatment Pond Closure Report (SIAD-015) June
Building 1003 Closure Report (SIAD-012) June
Building 210 Pilot Study (SIAD-014) August
RIP for Paint Shop Subsite (SIAD-001B) September
Explanation of Significant Difference for DSA (SIAD-011) December

1999

SIAD-002, Soil Removal December

2000

SIAD-014 Action Memorandum for Pump and Treat June
SIAD-014 Initiated Removal Action, Pump and Treat June
SIAD-002, Soil Vapor Extraction September

2001

SIAD-014 Enhanced Biodegredation Pilot Study October
SIAD-003 RI June
SIAD-010 RI June

2002

SIAD-014, Zero Valent Iron Pilot Study July
SIAD-014, Further Characterization of Plume January
SIAD-010, Characterization of Hansens Hole January
SIAD-011, Diesel Spill Area, RC December
SIAD-059, Unidentified Pit, RC June

2003

All open IRP sites were included in a PBC contract with Arcadis
Final RI/FS for OPS Area

2004

FFS for the Upper Burning Ground
IRZ Demonstration Program
FFS for Bldg 79 Equipment Yard
Three Sites Proposed Plan/ROD

PROJECTED MILESTONES

Complete IRP sites 2012

NO FURTHER ACTION SITES

The following sites currently require no further action under the ER,A program:

SIAD-004	CONSTRUCTION DEBRIS LANDFILL
SIAD-005	CHEMICAL BURIAL SITE
SIAD-009	AMMUNITION DEMILITARIZATION AND RENOVATION AREA
SIAD-011	DIESEL SPILL AREA
SIAD-012	BUILDING 1003 AREA
SIAD-015	LARGE SEWAGE TREATMENT PONDS
SIAD-016	LOWER BURNING GROUND
SIAD-017	NIKE MISSLE FUEL DISPOSAL SITE A
SIAD-018	NIKE MISSLE FUEL DISPOSAL SITE B
SIAD-019	TOXICS STORAGE BUILDING AT BUILDING 578
SIAD-021	EXISTING POPPING FURNACE
SIAD-024	AMMUNITION HAZARD TEST SITE
SIAD-025	“K” BLOCK AREA
SIAD-026	AMMO MAINTENANCE (BLDG 640) (NON-ELIGIBLE)
SIAD-027	ABANDONED LANDFILL
SIAD-028	TRANSFORMER-250 (NON-ELIGIBLE)
SIAD-029	HOSPITAL (BLDG 150) (NON-ELIGIBLE)
SIAD-031	STORAGE SILOS
SIAD-032	BUILDING T-79
SIAD-033	POSSIBLE BURIAL SITE
SIAD-034	SEPTIC TANKS/LEACH FIELDS
SIAD-035	STORAGE IGLOOS
SIAD-036	BLDG 75 & 79 AREA
SIAD-037	DIESEL SUMP AREA
SIAD-038	NORTHWEST WAREHOUSE AREA
SIAD-039	SMALL SEWAGE TREATMENT PONDS
SIAD-042	SW-AREA
SIAD-056	STRATEGIC ORE PILES
SIAD-057	INSTALLATION-WIDE GW PLUME

BRAC Responce Complete Sites

SIAD-007	EXISTING FIRE-FIGHTING TRAINING FACILITY (BRAC)
SIAD-008	HONEY LAKE
SIAD-013	OLD FIRE-FIGHTING TRAINING FACILITY (BRAC)
SIAD-023	COMP SURVEILLANCE TEST RANGE (BRAC)
SIAD-030	RIFLE/PISTOL RANGE
SIAD-040	PIT AT SOUTHEAST EDGE OF HONEY LAKE
SIAD-041	COMPLIANCE DU IGLOOS (BRAC)
SIAD-043	AIR STRIP REFUEL APRON
SIAD-044	RANGE LEAD/DEBRIS AIRSTRIP AREA (BRAC)
SIAD-045	AIRSTRIP DIESEL SPILL (BRAC)
SIAD-046	COMPLIANCE DU STORAGE AREAS (BRAC)
SIAD-051	COMPLIANCE ASBESTOS BRAC PARCEL
SIAD-056	STATEGIC ORE PILE (NOT ER,A ELIGIBLE)
SIAD-057	INSTALLATION-WIDE GW PLUME (NOT ER,A ELIGIBLE)
SIAD-059	EAST SHORE PARCEL (BRAC)

Remediation Activities

COMPLETED REM/IRA/ RA:

- SIAD-001, TNT-Leaching Beds, Remedial Action - Soil Composting and Removal, Groundwater Natural Degradation FY96.

- SIAD-002, DRMO Trench Area, Soil Removal.

- SIAD-012, Building 1003 Area, Remedial action, Soil Removal.

- SIAD-015, Large Sewage Treatment Ponds, Remedial Action - Soil Treatment.

- SIAD-016, Lower Burning Ground, Remedial Action - post and fence for UXO.

CURRENT REM/IRA/RA:

All sites under PBC.

RESTORATION ADVISORY BOARD (RAB) STATUS

A. Status of Community Involvement

There are 8 community members on the RAB. With the passing of special legislation for land transfer, community involvement may increase.

B. Determining Interest In Establishing RAB

The Restoration Program at Sierra Army Depot started in 1987. A Federal Facilities Site Remediation Agreement was signed in 1991. Community input was received through a Technical Review Committee (TRC) which had intermittant community attendance from 1993-1996.

1. Efforts Taken To Determine Interest

Restoration Advisory Board (RAB) was unofficially formed in December of 1996. There were a total of eight meetings held in 1997, with the signing of the RAB Charter in October 1997. Surveys have been provided to community members expressing interest. Newsletters are mailed bi-monthly. Community members have been interviewed for the update to the Community Relations Plan.

2. Results of Efforts to Determine Interest in a RAB

Response was received from the community and regulatory agencies.

3. Conclusions Concerning Establishing a RAB

The RAB includes 8 community members. Meetings are held 5 times per year. The Charter is being evaluated for update this year. A copy of the IAP is in the public repositories.